

New and little known Neuroptera of Central America

BY

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Hemerobiidae.

Gen. *Sympheromima* nov.

Allied to *Sympherobius* Banks.

Antennae moniliform. Fore wings elongate, more than twice as long as broad, slightly falcate at the apex. Costal area broad at base, the recurrent vein enclosing an elongate cell; most of the cross-veins forked. Two radial sectors, each forking more than once. Two gradate series in the fore wing, one in the hind wing. The first cross-vein between the first radial sector and the medius beyond the fork of the medius.

Genotype: *Sympheromima marginata* sp. n.

Sympheromima marginata sp. n. (fig. 1)

Dark brown, clothed with sparse pale hairs. Head paler shining brown, vertex and eyes dark. Antennae dark brown, becoming paler apically; the basal joint is large and dilated internally. Thorax dark brown above, yellowish beneath. Legs pale yellow. Abdomen missing.

Anterior wings slightly falcate, fringed with fine dark hairs, the membrane dark brown with white markings on the apical and posterior margins as follows: A large spot on the ends of the branches of the posterior fork of Rs_1 . A small spot on the ends of the branches of the posterior fork of M . One or two small spots on the ends of

the branches of *Cu*, and spots in the forks of many veins. Veins dark brown.

Posterior wing paler, nearly hyaline, the costal margin somewhat arched beyond the middle, the posterior margin most strongly arched before the middle.

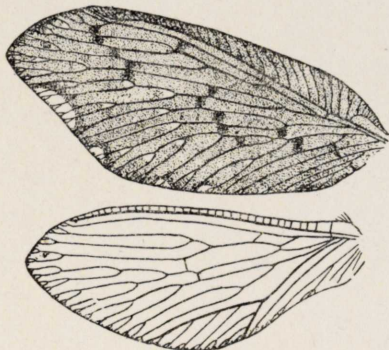


Fig. 1.—*Symphedomima marginata* sp. n.; $\times 5 \frac{1}{4}$.

In the fore wing, the first radial sector is forked three times before the gradate series, the second forked twice, connected back to the radius by a cross vein at the second fork. Medius with four branches, the first fork being beyond the origin of the first radial sector. A basal cross-vein between *M* and *Cu*. Five gradate veins

in the outer, and six in the inner, series.

In the hind wing one radial sector, which is forked twice; the gradate series contains but two veins.

Length of fore wing..... 8 mm.

Length of hind wing..... 6.5 —

One specimen (lacking abdomen and right fore wing) Guatemala, Cerro Zunil, 4-5,000 ft. (Champion).

Type in the British Museum.

The species in outward appearance resembles the genus *Sisyra* but is, of course, easily distinguished by the presence of a recurrent vein, two radial sectors, and by the fact that the subcosta terminates in the costa and not in the radius.

Gen. *Anotiobiella* nov. (fig. 2)

Wings short and broad. The costal area is broad and contains about twelve cross-veins before the pterostigma, and with a recurrent nervule at the base. There are three radial sectors in the fore wing, and two series of gradate veins in both fore and hind wings. *Cu*₁ has but few apical branches. The medius is bent towards the cubitus at the connecting vein.

This genus resembles superficially *Notiobiella*, but appears to be more closely allied to *Hemerobius*.

The genotype is the following species.

***Anotiobiella withycombei* sp. n.**

♂. Head pale yellow, shining; the genae, a streak beneath the antennae, and two streaks on the vertex near the eyes, are brown. Palpi brown. Antennae moniliform, pale yellow, the basal joint large, subcylindrical, slightly dilated internally and marked with brown externally.

Prothorax transverse, produced in front, brown, with a pale median band. Mesothorax whitish yellow with darker margins, the scutellum dark brown. The metathorax is brown with darker

margins. Legs pale yellow, the anterior tibiae short, the mid and posterior tibiae elongate and fusiform. The tarsi not darker.

Abdomen pale yellow, sparsely clothed with pale hairs. The genital appendages are long, cylindrical, directed downwards and slightly incurved.

The front wing is short and broad, hyaline. Venation pale with a few brown spots on the longitudinal veins, on the origin of the radial sectors, the base of the costa, subcosta and radius and on the termination of many veins. The gradate veins and most of the cross veins except the costal series brown. A brownish spot on the membrane over the anal veins and another over the termination of Cu_2 . Pterostigma round, dark brown, the veins within the pterostigmal area dark brown. There are three radial sectors, the third forked twice before the outer gradate series.

The outer series contains five or six veins and the inner series six veins.

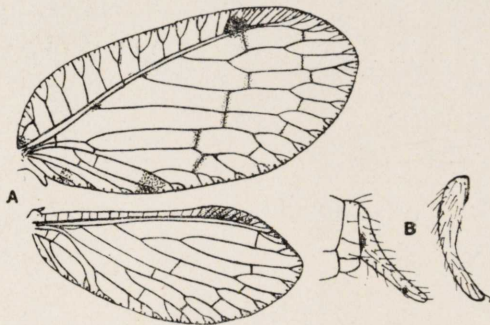


Fig. 2.—*Anotiobiella withycombei* sp. n.: A, Right wings, $\times 9$; B, Apex of ♂ abdomen, $\times 15$.

The hind wing is shorter than the fore wing and relatively narrower. The membrane is hyaline, the venation pale without dark marks. Pterostigma elongate, brownish. There are two radial sectors, the second forking twice. The outer gradate series contains five veins and the inner series three.

Length of fore wing.....	4,5 mm.
Length of hind wing.....	3,5 —
Length of body.....	3,0 —

1 ♂ Mexico, Tabasco, Teapa, March 1888 (H. H. Smith). Godman & Salvin Coll. Type (British Museum).

Hemerobius pallidulus n. n. for **H. neglectus** Hagen (1861)
(nec Costa 1855.)

♀. Head yellow, cheeks shining fuscous. The basal joint of the antenna yellow, the rest missing. Palpi yellow. The prothorax is yellow, with fuscous lateral bands and the extreme margin yellow. The legs are pale yellow, with the hind tibiae somewhat inflated. Abdomen yellowish fuscous above.

The fore wing is elongate-oval, the membrane speckled with brown. The costal area is moderately broad, but gradually narrowed at the base. There are three radial sectors, the third being forked three times before the outer gradate series. The medius is bent towards the cubitus at the connecting veinlet, which is very short and situated at the level of the subcostal cross-vein. The second cubital cell is closed. There are seven cross-veins in the outer, and six in the inner gradate series. A dark spot at the origin of each of the radial sectors and at the connecting vein between the medius and cubitus. The membrane is clouded with brown over the gradate series and at the margin of the wing.

The posterior wings of the type are missing.

Length of body.....	5 mm.
Length of fore wing.....	9 —

Mexico (Ehrenberg), bearing the labels *Hemerobius neglectus* Hag. L. Krüger determ. 1922 and Type on red paper.

The specimen is in the Berlin Museum.

***Hemerobius citrinus* Hagen.**

Syn. Neun. N. Amer. in Misc. Coll. Smithson. Inst., 1861, p. 204.

♀. Head yellow, the sides of the occiput and the cheeks fuscous; maxillary palpi yellow, having the last joint very thin and pointed. Antennae with the basal joints yellow, the remainder missing. The prothorax is yellow, the sides fuscous with sparse yellow hairs. Legs yellow, the hind tibia about three times the length of the femur, slightly inflated in the middle, and bearing a curved impressed line. Abdomen yellow fuscous.

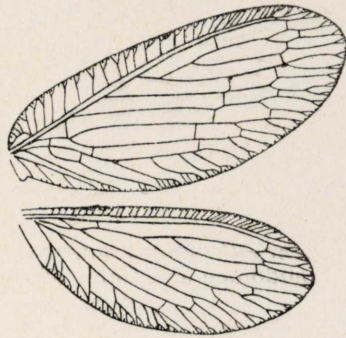


Fig. 3. — *Hemerobius citrinus* Hag., ♀. Right wings; $\times 5$.

Forewing (fig. 3) hyaline, obtusely rounded at the tip. Venation yellow, sparsely dotted with pale fuscous. The costal area is moderately broad at the base. There are three radial sectors, the third forking twice before the outer gradate series. The cross-vein from the medius to the radius ends near the origin of the first radial sector. Lower branch of the medius scarcely bent towards the cubitus. The outer gradate series contains seven veins in the left wing and eight veins in the right wing; in the inner series there are six veins.

The hind wing is hyaline, immaculate, but slightly darker at the apex, the veins yellow. Two radial sectors, the first emitting two, the second three branches before the outer gradate series. Seven veins in the outer, two in the inner gradate series.

Amer. Sept. (Knoch) Berlin Mus. bearing the label *Hagenobius citrinus* Hagen, L. Krüger determ. 1922 and a red Type label.

Length of fore wing	8,4 mm.
Length of hind wing	7 —

***Boriomyia magna* sp. n.**

Yellowish brown, wings mottled with brown, a dark brown patch on Cu_1 .

The head is yellowish, with brown genae, a brown line on each side of the face near the eyes and a few brown spots on the vertex.

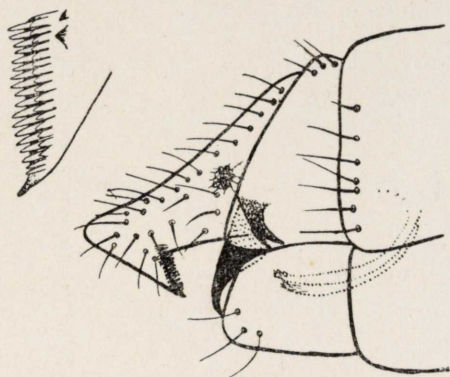


Fig. 4.—*Boriomyia magna* sp. n. Apex of abdomen and tooth of right appendage.

Antennae yellowish, moniliform, the basal joint large, bearing a brown line externally.

Prothorax and mesothorax yellowish, with blackish margins, metathorax with the anterior lateral margins only blackish. Legs yellowish, the coxae dark brown, the anterior femora with dark spots at base and apex. Tarsi reddish yellow. Abdomen yellow brown with short yellow hairs. Male appendages

(fig. 4) convex externally, narrowed towards the apex, which is produced anteriorly into a tooth on the inner side, the upper surface of the tooth being set with a row of lancet shaped teeth.

The fore wings are hyaline, rather narrow, with a pointed apex. Costal area gradually narrowed at base. Three radial sectors, the third forking twice before the stigma. Six veins in the outer gradate series, seven in the inner series. The venation is dark, with pale spots. From the dark areas arise angular brown fasciae on the membrane of the wing. The gradate veins are clouded with brown and there is a dark brown spot on the cubitus at the cross-vein from the medius, and a smaller one at the end of the upper cubitus.

The hind wings are hyaline, slightly clouded at the apex with brown. The radial sector branches three times before the stigma. Two gradate series, the outer series containing three, and the inner series two, veins. The venation is pale, with a few scattered brown spots. The pterostigma is reddish in both pairs of wings. The margins of the wings are alternately light and dark.

	♂	♀
Length of body.....	8 mm.	10 mm.
Length of fore wing.....	12 —	15 —
Length of hind wing.....	11 —	12,5 —

Four specimens from Guatemala (Champion), all in the British Museum.

1 ♂ Quiche Mts., 7,000-9,000 ft. Type.

1 ♂ Totoncapam, 8,500-10,500 ft. Paratype.

2 ♀ ♀ Totoncapam, 8,500-10,500 ft. Paratypes.

Sialidae.

Platyneuromus auritus sp. n.

♂. Colour luteus. The head (fig. 5) testaceous, luteus beneath. The projections behind the eyes are relatively larger, the anterior angle more rounded, and the posterior tooth less distinct than in *P. soror* Hagen. The mandibles are brown, the eyes greyish brown, and the ocelli yellow. Antennae brown.

The prothorax is slightly longer than broad, the dorsum luteus with dark brown margins, the sternum clear yellow. The meso- and metathorax entirely yellow. The legs yellow, anterior and intermediate tibiae brown externally.

Abdomen yellowish, with brown spots. The superior appendages (fig. 6) are broad, shorter than in *P. soror* Hag., overlapping at the apices, and resemble those of the genus *Neuromus*.

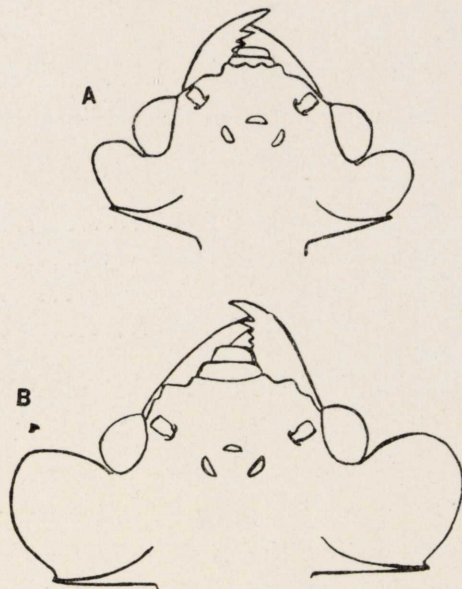


Fig. 5.—*P. auritus* sp. n.; $\times 4.5$:
A. Head of male. B. Head of female (?)
from Honduras.

The inferior appendages are much longer than in *P. soror* Hag., curved and clawlike, almost as long as the superior appendages.

Wings (fig. 7) rather broadly elliptical, membrane hyaline, clouded apically with grey. The venation is yellow, the costal and

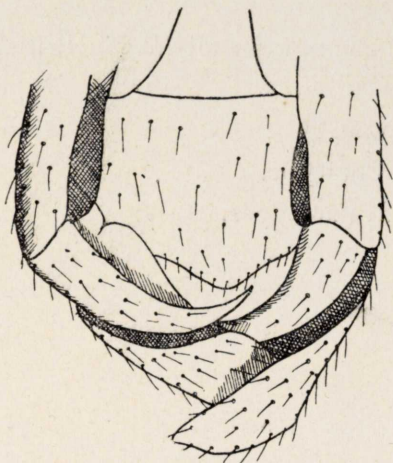


Fig. 6.

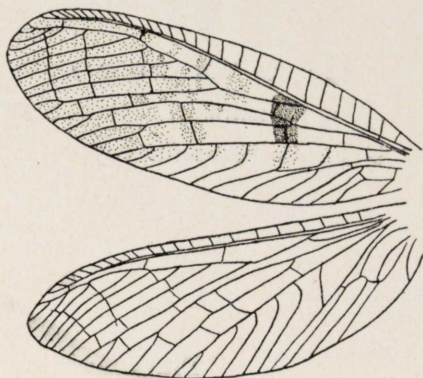


Fig. 7.

Fig. 6: *P. auritus* sp. n. ♂. Apex of abdomen from beneath.—Fig. 7: *P. auritus* sp. n. ♂. Left wings; $\times 1\frac{3}{4}$.

other cross-veins brown. There is a dark band on the membrane of the wing between the origin of the radial sector and the upper branch of the cubitus.

Length of body.....	31 mm.
Length of fore wing.....	32 —
Length of hind wing.....	28 —
Width of head.....	8 —

1 ♂ Honduras.

Type in the British Museum.

There is another specimen, also from Honduras, of which the abdomen is damaged, which may be the female of this species. It is larger than the type, the lateral expansions of the head (fig. 5, *B*) are even more pronounced, and the costal cross-veins are brown only at the ends.